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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------|------------------|
| 09/322,259 | 05/28/1999 | JOHN TERRANCE REAGAN | VLSI-3410 | 7735 |
| 24737 | 7590 | 01/16/2004 | EXAMINER | |
| PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510 | | | OPSASNICK, MICHAEL N | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2655 | 30 |

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/322,259

Applicant(s)

REAGAN

Examiner

Michael N. Opsasnick

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Tzeng (5293449) in view of DeJaco (648438), in further view of Su (5664054)

As per claims 1,5,9, and 13, Tzeng (5293449) teaches a vocoder (abstract, line 1-12):

“receiving.....by said vocoder” as calculating means square error to determine if threshold has been met (col. 8 lines 55-61)

“provided an input signal.....continuously generated” as measuring the amount of energy of the signal, and choosing either a voice codebook or unvoiced codebook (col. 8 lines 11-48)

Tzeng (5293449) teaches random codebook excitation for unvoiced frames (Figs. 2,7, and abstract), but does not explicitly teach subframes encoded at differing rates, wherein each of these subframes, encoded at that rate, causes a randomized selection of codebook excitation vector; however, DeJaco teaches a quarter rate unvoiced decision on a subframe (Fig. 2; col. 9 line 60 – col. 10 line 34). Therefore, it would have been obvious to one of ordinary skill in the art of speech coding to modify the teachings of

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Tzeng with differential rate encoding based on the level of speech because it would improve the compression rate for the signal (DeJaco, col. 5 lines 18-40). The combination of Tzeng (5293449) in view of DeJaco (648438) does not explicitly teach a single vector codebook, however, Su (5664054) teaches single vectors (col. 5 lines 4-15). Therefore, it would have been obvious to one of ordinary skill in the art of codebook design to modify the teachings of the combination of Tzeng (5293449) in view of DeJaco (648438) with a single vector as taught by Su (5664054) because it would simplify the vector (rather than having multiple scalar indices -- Su (5664054) col. 5 lines 4-6).

As per claims 2,6,10, and 14, Tzeng (5293449) teaches:

“receiving said determined input energy..... $4q^2$ ” as energy distortion threshold (col. 9 lines 25-31)

As per claims 3,7,11, and 15, Tzeng (5293449) teaches:

“calculating.....for said input signal” as summation of squares (col. 9 lines 25-34)

“provided said sum of squares value.....continuously generated’ as using the error equation to determine the use of random codebook excitation (col. 9 lines 44-60)

As per claims 4,8,12, and 16, Tzeng (5293449) teaches:

“calculating a sum.....input signal” as summation of squares (col. 9 lines 25-34)

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“provided said sum of squares value....codebook excitation vector” as using non-random excitation vector when error function dictates (col. 9 lines 44-57, col. 8 lines 41-57).

Response to Arguments

3. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872 9314,

(for informal or draft communications, please label "PROPOSED" or "DRAFT")

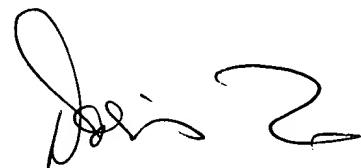
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (703)305-4089, who is available Tuesday-Thursday, 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To, can be reached at (703)305-4827. The facsimile phone number for this group is (703)872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (703) 305-4750, the 2600 Customer Service telephone number is (703) 306-0377.

mno
1/9/2004



DORIS H. TO 1/9/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600